Author index for papers in Volume 38

Pages are numbered consecutively through the volume: 1–111, January; 113–240, March; 241–344, May; 345–488, July; 489–648, September; and 649–743, November.

Agarwal, R. C., F. G. Gustavson, and M. Zubair
265 *Improving performance of linear algebra algorithms for dense matrices, using algorithmic prefetch*

Agarwal, R. C., F. G. Gustavson, and M. Zubair
563 *Exploiting functional parallelism of POWER2 to design high-performance numerical algorithms*

Agarwal, R. C., F. G. Gustavson, and M. Zubair
673 *A high-performance matrix-multiplication algorithm on a distributed-memory parallel computer, using overlapped communication*

Alexander, W. P.
555 see Franklin, M. T.

Arbabi, M., S. M. Fischthal, V. C. Cheng, and E. Bart
183 *Algorithms for Arabic name transliteration*

Arimilli, L. B.
537 see Barreh, J. I.

Arjavalingam, G.
659 see Deutsch, A.

Baglin, J. E. E.
413 *Thin film bonding using ion beam techniques—A review*

Barreh, J. I., R. T. Golla, L. B. Arimilli, and P. J. Jordan
537 *POWER2 instruction cache unit*

Bart, E.
183 see Arbabi, M.

Bergman, W. C.
651 see Boudreau, P. E.

Billings, R. V.
621 see Brodnax, T. B.

Blainey, R. J.
577 *Instruction scheduling in the TOBEY compiler*

Blaner, B.
59 see Vassiliadis, S.

Boudreau, P. E., W. C. Bergman, and D. R. Irvin
651 *Performance of a cyclic redundancy check and its interaction with a data scrambler*

Bradford, B. L.
117 *The Fast Staggered Transform, composite symmetries, and compact symmetric algorithms*

Brodnax, T. B., R. V. Billings, S. C. Glenn, and P. T. Patel
621 *Implementation of the PowerPC 601 microprocessor*

Brown, H. R.
379 *Adhesion between polymers*

Chan-Nui, C. C.
545 see Welbon, E. H.

Cheng, V. C.
183 see Arbabi, M.

Chesshire, G. and V. K. Naik
285 *An environment for parallel and distributed computation with application to overlapping grids*

Coppersmith, D.
243 *The Data Encryption Standard (DES) and its strength against attacks*

Denardo, E. V., A. J. Hoffman, T. Mackenzie, and W. R. Pulleyblank
301 *A nonlinear allocation problem*

Derderian, T.
441 see Saraf, R. F.

Deutsch, A., G. Arjavalingam, C. W. Surovic, A. P. Lanzetta, K. E. Fogel, F. Doany, and M. B. Ritter
659 *Performance limits of electrical cables for intrasystem communication*

Dhawan, S.
493 see White, S. W.

Doany, F.
659 see Deutsch, A.

Dreyfus, R. W.
3 see Vertes, A.

Dürig, U.
347 *Atomic-scale metal adhesion investigated by scanning tunneling microscopy*

Egitto, F. D. and L. J. Matienzo
423 *Plasma modification of polymer surfaces for adhesion improvement*

Eickemeyer, R. J.
59 see Vassiliadis, S.

Fischthal, S. M.
183 see Arbabi, M.

Fogel, K. E.
659 *see Deutsch, A.*

Franklin, M. T., W. P. Alexander, R. Jauhari, A. M. G. Maynard, and B. R. Olszewski
555 *Commercial workload performance in the IBM POWER2 RISC System/6000 processor*

Fry, R. E.
525 see Hicks, T. N.

Glenn, S. C.
621 see Brodnax, T. B.

Glickstein, I. S.
167 *see Stiles, P. N.*

Golla, R. T.
537 *see Barreh, J. I.*

Gozzo, F.
131 Recursive least-squares sequence estimation

Griffith, T. W.
503 see Shippy, D. J.

Gustavson, F. G.
265 see Agarwal, R. C.

Gustavson, F. G.
563 *see Agarwal, R. C.*

Gustavson, F. G.
673 see Agarwal, R. C.

Harvey, P. E.
525 see Hicks, T. N.

Heisch, R. R.
595 Trace-directed program restructuring for AIX *executables*

Hicks, D. A.
545 see Welbon, E. H.

Hicks, T. N., R. E. Fry, and P. E. Harvey
525 POWER2 floating-point unit: Architecture and *implementation*

Ho, C.-T. and S. L. Johnsson
35 Embedding hyperpyramids into hypercubes

Hoffman, A. J.
301 see Denardo, E. V.

Hosking, J. R. M.
251 *The four-parameter kappa distribution*

Irvin, D. R.
651 see Boudreau, P. E.

Jauhari, R.
555 see Franklin, M. T.

Jensen, D. L. and R. A. Polyak
307 *The convergence of a modified barrier method for convex programming*

Johnson, D. B., S. M. Matyas, A. V. Le, and J. D. Wilkins
217 *The Commercial Data Masking Facility (CDMF) data privacy algorithm*

Johnsson, S. L.
31 see Ho, C.-T.

Jordan, P. J.
537 *see Barreh, J. I.*

Kurtzberg, Jerome M. and Menachem Levanoni
11 *ABC: A better control for manufacturing*

Lanzetta, A. P.
659 see Deutsch, A.

Le, A. V.
217 *see Johnson, D. B.*

Lee, K.-W. and A. Viehbeck
457 *Wet-process surface modification of dielectric polymers: Adhesion enhancement and metallization*

Levanoni, Menachem
11 *see Kurtzberg, Jerome M.*

Mackenzie, T.
301 *see Denardo, E. V.*

Marsh, R. A.
195 see Rudd, J. G.

Matienzo, L. J.
423 see Egitto, F. D.

Matyas, S. M.
217 see Johnson, D. B.

Maynard, A. M. G.
555 *see Franklin, M. T.*

McNutt, B.
47 *Background data movement in a log-structured disk subsystem*

Merkel, L. J.
605 *see Vaden, M. T.*

Mhaskar, H. N. and C. A. Micchelli
277 *Dimension-independent bounds on the degree of approximation by neural networks*

Micchelli, C. A.
277 *see Mhaskar, H. N.*

Moore, C. R.
605 see Vaden, M. T.

Naik, V. K.
285 see Chesshire, G.

Olszewski, B. R.
555 see Franklin, M. T.

Patel, P. T.
621 see Brodnax, T. B.

Platt, D. E.
3 see Vertes, A.

Polyak, R. A.
307 see Jensen, D. L.

Potter, T. M.
605 see Vaden, M. T.

Pritt, M. D.
157 *Automated subpixel image registration of remotely sensed imagery*

Pulleyblank, W. R.
301 *see Denardo, E. V.*

Raghavan, P. and M. Snir
683 *Memory versus randomization in on-line algorithms*

Reese, R. J.
605 see Vaden, M. T.

Ritter, M.
659 see Deutsch, A.

Roecker, J. A.
195 see Rudd, J. G.

Roldan, J. M.
441 see Saraf, R. F.

Rudd, J. G., *R. A. Marsh, and J. A. Roecker*
195 *Surveillance and tracking of ballistic missile launches*

Saraf, R. F., *J. M. Roldan, and T. Derderian*
441 *Tailoring the surface morphology of polyimide for improved adhesion*

Shippy, D. J.
545 see Welbon, E. H.

Shippy, D. J. *and T. W. Griffith*
503 *POWER2 fixed-point, data cache, and storage control units*

Shub, M.
259 *The implicit function theorem revisited*

Snir, M.
683 see Raghavan, P.

Spool, A. M.
391 *Studies of adhesion by secondary ion mass spectrometry*

Stiles, P. N. and J. S. Glickstein
167 High parallelizable route planner based on cellular automata algorithms

Surovic, C. W.
659 see Deutsch, A.

Thouless, M. D.
367 Fracture mechanics for thin-film adhesion

Vaden, M. T., L. J. Merkel, C. R. Moore, T. M. Potter, and *R. J. Reese*
605 *Design considerations for the PowerPC 601 microprocessor*

Vassiliadis, S., *B. Blaner, and R. J. Eickemeyer*
59 *SCISM: A scalable compound instruction set machine*

Vertes, A., *R. W. Dreyfus, and D. E. Platt*
3 *Modeling the thermal-to-plasma transitions for Cu photoablation*

Viehbeck, A.
457 see Lee, K.-W.

Welbon, E. H., *C. C. Chan-Nui, D. J. Shippy, and* D. A. Hicks
545 *The POWER2 performance monitor*

White, S. W. *and S. Dhawan*
493 *POWER2: Next generation of the RISC System/6000 family*

Wilkins, J. D.
217 see Johnson, D. B.

Zubair, M.
265 see Agarwal, R. C.

Zubair, M.
563 see Agarwal, R. C.

Zubair, M.
673 see Agarwal, R. C.

Subject index for papers in Volume 38

Each index entry below is accompanied by an author's name and a page number; the author index contains the title of the paper and the names of coauthors, if any.

Subject	Author	Page
Adhesion science		
Adhesion between polymers	Brown	379
Atomic-scale metal adhesion investigated by scanning tunneling microscopy	Dürig	347
Fracture mechanics for thin-film adhesion	Thouless	367
Plasma modification of polymer surfaces for adhesion improvement	Egitto	423
Studies of adhesion by secondary ion mass spectrometry	Spool	391
Tailoring the surface morphology of polyimide for improved adhesion	Saraf	441
Thin film bonding using ion beam techniques—A review	Baglin	413
Wet-process surface modification of dielectric polymers: Adhesion enhancement and metallization	Lee	457
Algorithms		
Algorithms for Arabic name transliteration	Arbabi	183
Exploiting functional parallelism of POWER2 to design high-performance numerical algorithms	Agarwal	563
Highly parallelizable route planner based on cellular automata algorithms	Stiles	167
Memory versus randomization in on-line algorithms	Raghavan	683
Performance of a cyclic redundancy check and its interaction with a data scrambler	Boudreau	651
Surveillance and tracking of ballistic missile launches	Rudd	195
The Commercial Data Masking Facility (CDMF) data privacy algorithm	Johnson	217
Analytical models		
Fracture mechanics for thin-film adhesion	Thouless	367
Arithmetic and logical unit design		
POWER2 fixed-point, data cache, and storage control units	Shippy	503
POWER2 floating-point unit: Architecture and implementation	Hicks	525
Artificial intelligence		
Algorithms for Arabic name transliteration	Arbabi	183
Automata		
Highly parallelizable route planner based on cellular automata algorithms	Stiles	167
Beams, charged particle		
Thin film bonding using ion beam techniques—A review	Baglin	413
Chemistry and chemical engineering		
Plasma modification of polymer surfaces for adhesion improvement	Egitto	423
Studies of adhesion by secondary ion mass spectrometry	Spool	391
Wet-process surface modification of dielectric polymers: Adhesion enhancement and metallization	Lee	457
Circuit and device technology		
Design considerations for the PowerPC 601 microprocessor	Vaden	605
Implementation of the PowerPC 601 microprocessor	Brodnax	621
Codes and coding		
Performance of a cyclic redundancy check and its interaction with a data scrambler	Boudreau	651
Communications and communication networks		
Embedding hyperpyramids into hypercubes	Ho	31
Compilers and interpreters		
Instruction scheduling in the TOBEY compiler	Blainey	577
Computation		
An environment for parallel and distributed computation with application to overlapping grids	Chesshire	285
Improving performance of linear algebra algorithms for dense matrices, using algorithmic prefetch	Agarwal	265

The implicit function theorem revisited — Shub — 259

Computational methods
A high-performance matrix-multiplication algorithm on a distributed-memory parallel computer, using overlapped communication — Agarwal — 673
Exploiting functional parallelism of POWER2 to design high-performance numerical algorithms — Agarwal — 563
Improving performance of linear algebra algorithms for dense matrices, using algorithmic prefetch — Agarwal — 265
The implicit function theorem revisited — Shub — 259

Computer architecture
Design considerations for the PowerPC 601 microprocessor — Vaden — 605
POWER2 fixed-point, data cache, and storage control units — Shippy — 503
POWER2 floating-point unit: Architecture and implementation — Hicks — 525
POWER2 instruction cache unit — Barreh — 537
POWER2: Next generation of the RISC System/6000 family — White — 493
SCISM: A scalable compound instruction set machine — Vassiliadis — 59
The POWER2 performance monitor — Welbon — 545

Computer organization and design
Design considerations for the PowerPC 601 microprocessor — Vaden — 605
POWER2 fixed-point, data cache, and storage control units — Shippy — 503
POWER2 floating-point unit: Architecture and implementation — Hicks — 525
POWER2 instruction cache unit — Barreh — 537
POWER2: Next generation of the RISC System/6000 family — White — 493
SCISM: A scalable compound instruction set machine — Vassiliadis — 59
The POWER2 performance monitor — Welbon — 545

Contamination
Plasma modification of polymer surfaces for adhesion improvement — Egitto — 423
Thin film bonding using ion beam techniques—A review — Baglin — 413

Copper
Modeling the thermal-to-plasma transitions for Cu photoablation — Vertes — 3

Cryptography
The Commercial Data Masking Facility (CDMF) data privacy algorithm — Johnson — 217
The Data Encryption Standard (DES) and its strength against attacks — Coppersmith — 243

Data encryption standard (DES)
The Data Encryption Standard (DES) and its strength against attacks — Coppersmith — 243

Data transmission
Performance limits of electrical cables for intrasystem communication — Deutsch — 659
Performance of a cyclic redundancy check and its interaction with a data scrambler — Boudreau — 651

Data, structures and accessing
A high-performance matrix-multiplication algorithm on a distributed-memory parallel computer, using overlapped communication — Agarwal — 673
Improving performance of linear algebra algorithms for dense matrices, using algorithmic prefetch — Agarwal — 265

Dielectrics
Wet-process surface modification of dielectric polymers: Adhesion enhancement and metallization — Lee — 457

Diffusion
Adhesion between polymers — Brown — 379

Distributed processing
A high-performance matrix-multiplication algorithm on a distributed-memory parallel computer, using overlapped communication — Agarwal — 673
An environment for parallel and distributed computation with application to overlapping grids — Chesshire — 285

Electromagnetics
Performance limits of electrical cables for intrasystem communication — Deutsch — 659

Error correction codes
Performance of a cyclic redundancy check and its interaction with a data scrambler — Boudreau — 651

Error detection and correction
Performance of a cyclic redundancy check and its interaction with a data scrambler — Boudreau — 651

Fourier transforms
The Fast Staggered Transform, composite symmetries, and compact symmetric algorithms — Bradford — 117

Game theory
Memory versus randomization in on-line algorithms — Raghavan — 683
The convergence of a modified barrier method for convex programming — Jensen — 307

Graph theory
Embedding hyperpyramids into hypercubes — Ho — 31

I/O devices, systems, and technology
Background data movement in a log-structured disk subsystem — McNutt — 47

Image processing
Automated subpixel image registration of remotely sensed imagery — Pritt 157

Interfaces
Adhesion between polymers — Brown 379
Fracture mechanics for thin-film adhesion — Thouless 367
Studies of adhesion by secondary ion mass spectrometry — Spool 391
Thin film bonding using ion beam techniques—A review — Baglin 413

Lasers
Modeling the thermal-to-plasma transitions for Cu photoablation — Vertes 3

Logic design and technology
Implementation of the PowerPC 601 microprocessor — Brodnax 621
POWER2 fixed-point, data cache, and storage control units — Shippy 503
POWER2 floating-point unit: Architecture and implementation — Hicks 525
POWER2 instruction cache unit — Barreh 537
SCISM: A scalable compound instruction set machine — Vassiliadis 59

Manufacturing
ABC: A better control for manufacturing — Kurtzberg 11
Implementation of the PowerPC 601 microprocessor — Brodnax 621

Mass spectrometry
Studies of adhesion by secondary ion mass spectrometry — Spool 391

Mathematical functions and techniques
Dimension-independent bounds on the degree of approximation by neural networks — Mhaskar 277
Exploiting functional parallelism of POWER2 to design high-performance numerical algorithms — Agarwal 563
The four-parameter kappa distribution — Hosking 251
The implicit function theorem revisited — Shub 259

Mathematics (applied)
A nonlinear allocation problem — Denardo 301
An environment for parallel and distributed computation with application to overlapping grids — Chesshire 285
Automated subpixel image registration of remotely sensed imagery — Pritt 157
Dimension-independent bounds on the degree of approximation by neural networks — Mhaskar 277
Exploiting functional parallelism of POWER2 to design high-performance numerical algorithms — Agarwal 563
Highly parallelizable route planner based on cellular automata algorithms — Stiles 167
Recursive least-squares sequence estimation — Gozzo 131
The convergence of a modified barrier method for convex programming — Jensen 307
The Data Encryption Standard (DES) and its strength against attacks — Coppersmith 243
The Fast Staggered Transform, composite symmetries, and compact symmetric algorithms — Bradford 117
The four-parameter kappa distribution — Hosking 251
The implicit function theorem revisited — Shub 259

Measurement
Studies of adhesion by secondary ion mass spectrometry — Spool 391

Mechanical analysis
Adhesion between polymers — Brown 379

Mechanics and mechanisms
Fracture mechanics for thin-film adhesion — Thouless 367

Memory, cache
POWER2 instruction cache unit — Barreh 537

Microelectronics
Design considerations for the PowerPC 601 microprocessor — Vaden 605
Implementation of the PowerPC 601 microprocessor — Brodnax 621

Microprocessor systems and applications
Design considerations for the PowerPC 601 microprocessor — Vaden 605

Models and modeling
ABC: A better control for manufacturing — Kurtzberg 11
Background data movement in a log-structured disk subsystem — McNutt 47
Modeling the thermal-to-plasma transitions for Cu photoablation — Vertes 3

Nanoscale structures and devices
Atomic-scale metal adhesion investigated by scanning tunneling microscopy — Dürig 347

Networks
A nonlinear allocation problem — Denardo 301
Dimension-independent bounds on the degree of approximation by neural networks — Mhaskar 277
Embedding hyperpyramids into hypercubes — Ho 31

Neural networks
Algorithms for Arabic name transliteration — Arbabi 183
Dimension-independent bounds on the degree of approximation by neural networks — Mhaskar 277

Noise
Recursive least-squares sequence estimation — Gozzo 131

Operating systems
Trace-directed program restructuring for AIX executables — Heisch 595

Optimization
A nonlinear allocation problem — Denardo 301
The convergence of a modified barrier method for convex programming — Jensen 307

Parallel processing
A high-performance matrix-multiplication algorithm on a distributed-memory parallel computer, using overlapped communication — Agarwal 673
An environment for parallel and distributed computation with application to overlapping grids — Chesshire 285

Performance analysis
Background data movement in a log-structured disk subsystem — McNutt 47
Commercial workload performance in the IBM POWER2 RISC System/6000 processor — Franklin 555
The POWER2 performance monitor — Welbon 545

Physical chemistry
Tailoring the surface morphology of polyimide for improved adhesion — Saraf 441

Physics, solid state
Atomic-scale metal adhesion investigated by scanning tunneling microscopy — Dürig 347
Fracture mechanics for thin-film adhesion — Thouless 367

Physics, theoretical
Fracture mechanics for thin-film adhesion — Thouless 367

Plasmas
Plasma modification of polymer surfaces for adhesion improvement — Egitto 423

Polymers
Adhesion between polymers — Brown 379
Plasma modification of polymer surfaces for adhesion improvement — Egitto 423
Tailoring the surface morphology of polyimide for improved adhesion — Saraf 441
Wet-process surface modification of dielectric polymers: Adhesion enhancement and metallization — Lee 457

Probability distributions
The four-parameter kappa distribution — Hosking 251

Process control and development
ABC: A better control for manufacturing — Kurtzberg 11
Tailoring the surface morphology of polyimide for improved adhesion — Saraf 441
Wet-process surface modification of dielectric polymers: Adhesion enhancement and metallization — Lee 457

Programming, mathematical
A nonlinear allocation problem — Denardo 301
The convergence of a modified barrier method for convex programming — Jensen 307

Programming, programs, and programming languages
Instruction scheduling in the TOBEY compiler — Blainey 577
Trace-directed program restructuring for AIX executables — Heisch 595

Quality control
ABC: A better control for manufacturing — Kurtzberg 11

Reduced-instruction-set computers (RISC)
Commercial workload performance in the IBM POWER2 RISC System/6000 processor — Franklin 555
Exploiting functional parallelism of POWER2 to design high-performance numerical algorithms — Agarwal 563
Instruction scheduling in the TOBEY compiler — Blainey 577
POWER2 fixed-point, data cache, and storage control units — Shippy 503
POWER2 floating-point unit: Architecture and implementation — Hicks 525
POWER2 instruction cache unit — Barreh 537
POWER2: Next generation of the RISC System/6000 family — White 493
Surveillance and tracking of ballistic missile launches — Rudd 195
The POWER2 performance monitor — Welbon 545
Trace-directed program restructuring for AIX executables — Heisch 595

Remote sensing
Automated subpixel image registration of remotely sensed imagery — Pritt 157

Scanning tunneling microscopy
Atomic-scale metal adhesion investigated by scanning tunneling microscopy — Dürig 347

Simulation
ABC: A better control for manufacturing — Kurtzberg 11
SCISM: A scalable compound instruction set machine — Vassiliadis 59

Sputtering
Studies of adhesion by secondary ion mass spectrometry — Spool 391

Storage (computer) devices and systems
Background data movement in a log-structured disk subsystem — McNutt 47

Storage hierarchies
Improving performance of linear algebra algorithms for dense matrices, using algorithmic prefetch — Agarwal 265
Memory versus randomization in on-line algorithms — Raghavan 683

Surface effects
Tailoring the surface morphology of polyimide for improved adhesion — Saraf — 441

Surface science
Atomic-scale metal adhesion investigated by scanning tunneling microscopy — Dürig — 347
Plasma modification of polymer surfaces for adhesion improvement — Egitto — 423
Studies of adhesion by secondary ion mass spectrometry — Spool — 391
Tailoring the surface morphology of polyimide for improved adhesion — Saraf — 441
Wet-process surface modification of dielectric polymers: Adhesion enhancement and metallization — Lee — 457

Testing, chip
Implementation of the PowerPC 601 microprocessor — Brodnax — 621

Topology
Embedding hyperpyramids into hypercubes — Ho — 31

X-ray diffraction
Tailoring the surface morphology of polyimide for improved adhesion — Saraf — 441